Discussion of Katta

Claims 1, 3-5, 7-12, 14-16, 18-21, and 23-26 are rejected as being anticipated by Katta. This rejection is respectfully traversed. An anticipation rejection requires that each and every element of the claimed invention as set forth in the claim be provided in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. As discussed in detail below, Katta does not meet the requirements for an anticipation rejection.

Katta discloses a scrambling apparatus and descrambling apparatus, which limit access to transmitted or stored digitized signals by scrambling the signals to such a degree that descrambling and reproduction by unauthorized parties is not completely disabled, but is disabled to the extent that the content of unauthorized reproduction data is partially but not completely discernable (Col. 2, lines 7-12).

In the embodiment of Katta's system referenced by the Examiner, dummy information is inserted into the MPEG header (meta data) fields. The dummy information, which replaces or modifies the original meta data, conveys slightly different information about the decoding parameters of the MPEG stream, such as a quantization width which is different from that used during the original quantization process (Col. 2, lines 35-50; Col. 12, lines 63-65). Therefore, if a decoder is not aware of the insertion of the dummy data, it will try to decompress the video frames using the wrong set of instructions (i.e., the wrong quantization matrix). The result of this

decompression would be, for example, a warped or distorted picture. Only a decoder equipped with a signal detector 70 of Katta can recognize the presence of the dummy data and extract the correct decoding parameters (see Katta, Column 12, discussion of "Descrambling Apparatus").

In Applicants' claimed invention, selected least significant bits (LSBs) of the actual data samples are scrambled. The LSBs to be scrambled are selected in accordance with a dynamic range of the data sample. The dynamic range is defined by a most significant non-zero data bit of each data sample.

In contrast, Katta uses a scrambling mode signal sm1 for selecting one or more of five scrambling modes. Each scrambling mode affects the decompression parameters, which then cause the samples, if decompressed with these parameters, to appear distorted. The different bits of the scrambling mode signal denote the different scrambling modes, and are not used to select which bits are scrambled.

For example, in Katta, the least significant bit of the scrambling mode signal sm1 defines quantization matrix scrambling (Col. 6, lines 60-67). With the quantization matrix scrambling of Katta, dummy information is inserted into the MPEG header of the signal to control the decoding process. A scrambling pattern signal sm2 defines a dummy pattern to be used for the quantization mode (i.e., which dummy information will be inserted into the header information of the signal) (Col. 7, lines 14-53). As discussed above, decoding based on this dummy information will result in a distorted picture. Katta does not disclose inserting dummy information into the actual data samples as

is apparently assumed by the Examiner. Rather, the dummy information of Katta is inserted into the MPEG header. It is noted that Applicants' claims relate to protecting and/or descrambling of "digital samples of content" wherein portions of the samples of the digital content are scrambled or descrambled.

Katta does not disclose or remotely suggest Applicants' claimed scrambling techniques. In particular, there is no disclosure or suggestion in Katta regarding the determination of a dynamic range of each sample of digital content, where the dynamic range is defined by a most significant data bit of the data sample, as claimed by Applicants. Accordingly, Katta does not disclose or remotely suggest selecting a number of LSBs of the samples to be scrambled in accordance with the determined dynamic range of each sample, as claimed by Applicants.

Further, there is no disclosure in Katta of scrambling selected LSBs of each sample and preserving a number of most significant bits (MSBs) for each sample so that the scrambled samples are degraded but still recognizable. In Katta, dummy data is inserted into the header portion of an MPEG-encoded compressed stream to convey different compression-coding parameters (e.g., quantization width parameters) than what was used during normal coding. Decoding the signal using the dummy header information will result in a signal that is partially but not completely discernable (see, e.g., col. 2, line 17). However, this result is not achieved by selecting certain LSBs of samples of the digital content according to a dynamic range of the

sample and scrambling the selected LSBs, as claimed by Applicants.

As Katta does not disclose each and every element of the invention as claimed, the rejections under 35 U.S.C. § 102(e) are believed to be improper, and withdrawal of the rejections is respectfully requested. See, *Akamai Technologies Inc., supra*.

Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious in view of Katta, taken alone or in combination with any of the other prior art of record. The prior art fails to disclose or suggest the claimed steps of, *inter alia*, (i) determining a dynamic range of samples of digital content; (ii) adaptively selecting a number of LSBs of the samples to be scrambled according to the dynamic range; and (iii) scrambling the selected LSBs while preserving a number of MSBs. Nor is there anything in the prior art that would motivate one skilled in the art to combine any of the references of record in a matter that would render the invention obvious.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Withdrawal of the rejections under 35 U.S.C. § 102(e) is therefore respectfully requested.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,

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